

TAG 2.3 Investigate
What Factors Affect the Performance
of a Propeller-driven Car?

Name _____
Hour _____ Date _____

Read p. 103. Listen for your teacher's instructions on what question you will investigate.

Write your group's question on your "My Experiment: Procedure" page.



Plan Your Experiment read pgs. 104-108
Complete each section on your "My Experiment: Procedure" page.

Keeping Records

Read the rest of p. 108. Go back to your "My Experiment: Procedure" page and make any additions that you need to. Keeping in mind the requirements listed under "Procedure and Data" on your "My Experiment: Procedure" page, record numbered, detailed instructions for your procedure below:

Step	
1	
2	
3	
4	
5	
6	
7	
8	
9	

Communicate

Follow your teacher's directions to share your ideas. Be ready to answer the questions listed on p. 109 in your book. Most of the questions can be answered from your "My Experiment: Procedure" page, but answer the last two questions here:

Do you foresee any problems with your plan?

Is there anything you need help with?



Discuss and answer the following questions with your class:
What dependent variable should everybody measure?

Which variables will be important for everybody to control in their experiments?

What advice do you have so that everybody's results will be useful and accurate?

Revise Your Procedure

If your procedure needs any changes to make it a fair test, make those changes now.

Conduct Your Experiment

Do your procedure, recording your results on the "My Experiment: Results" page under "Data."

Analyze Your Results

Read this paragraph at the bottom of p. 110 and the items at the top of p. 111. Create a line graph in the "Trends" box on your Results page. Make sure the independent (manipulated) variable is on the x-axis and the dependent (responding) variable is on the y-axis.

In the "Claims" box, write an answer to your question in the following format:

When the <<independent variable>> is <<larger/smaller>>, the car travels <<farther/not as far>>.

Why do you think you got the results you did?

What do you still need to learn to better explain your results?

Recommend

Read the paragraphs under "Recommend" on p. 113. Follow those directions to make a recommendation on the "Create Your Explanation" page.

Communicate

Listen while *each* group shares their recommendations. Record their recommendations below.

Group	Recommendation

What science knowledge do you still need to know to better support your recommendations?

What's the Point?

Read this paragraph at the bottom of p. 114. What three things does a well-designed experiment require?

- 1.
- 2.
- 3.